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ABSTRACT

This paper examines various areas related to industry's role in and awareness of the need to respect environmental considerations, both from the perception of the factors relevant to staying in business in the longer term, and the regulations and requirements formulated by governments, often in cooperation with the industrial sector concerned. They include: (1) goals and objectives of the Man and the Biosphere (MAB) Program, evaluation of MAB activities, and Canadian involvement in the MAB program; (2) the International Environmental Education Program; (3) other international programs designed to focus on environmental issues having direct impact on the general public and on industry (including the World Commission on Environment and and Development); (4) current and proposed global scale multidisciplinary studies; (5) government-industry partnerships related to environmental issues; (6) the meaning of the phrase "environmentally acceptable" as an objective in designing and qualifying industrial projects for implementation; (7) environmental education programs; and (8) the role of government departments charged with the responsibility for the environment and environmental education. In addition, the author provides his personal views about various aspects of the environment. (JN)

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INTERNATIONAL CONFERENCE ON ENVIRONMENTAL EDUCATION

"INDUSTRY"S TASK - TO KEEP NATURE IN BUSINESS"

U.S. DEPARTMENT OF EDUCATION
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by

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sponsored by

The North American Association for Environmental Education

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Lake Louise, Alberta, Canada

October 7, 1984

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INTRODUCTION

My pleasure at being able to discuss "Industry's Task - To Keep Nature in Business" with you is great indeed. This topic was selected by me as an extension of the general theme of "Keeping Nature in Business" which I have been stating as the essential and ultimate objective of governments, industry, environmentalists and the general public for many years. It is the "bottom line" for them all.

The original invitation that I present an address to this Conference suggested the title "The Need of Resolution of Conflict Between Industrialists and Environmentalists". Twenty years ago I would have considered this title quite appropriate. Today, while there may be conflict, it is a quite different situation. On the one hand, those responsible for making significant decisions in industry are increasingly well aware of the need to respect environmental considerations, both from their own perception of the factors relevant to staying in business in the longer term, and the regulations and requirements formulated by governments, often in co-operation with the industrial sector concerned.

On the other hand, considering today's environmentalists, I quote an admirably accurate passage from "Environment News", Volume 7, number two, March/April 1984, published by Alberta Environment, "From the placard-waving rabble of the Sixties environment movement has emerged a sophisticated, even scholarly, corps of Eighties-style activists. It's probably a smaller crew, as many of the baby-boom generation are lulled by newly acquired comforts and preoccupied by increased responsibilities".

"Still, the good fight continues to be fought. The front lines are

now in the classroom and boardroom more often than in the streets outside the legislature".

"We look at the three main avenues of environmental action:-

- education (both school-based on what might be called public consciousness-raising, relying on the media).
- litigation, and,
- the range of alternatives to litigation, which include negotiation and mediation."

These changes have come about largely as a result of environmental education.

In the light of today's circumstances and perceptions, I trust that you will understand the reasons for preferring a title that is clearly understandable to industry and the public, and I am confident that it is to you. The "good fight" will undoubtedly continue and I agree that it should in the best interests of our environment, but it should continue in its proper place and based on adequate and valid information and on a much broader understanding and sensitivitiy on the part of all concerned.

I understand that I was asked to speak to you primarily because of my role as Chairman of the Canadian Committee for the UNESCO Man and the Biosphere Programme, Canada/MAB, which has extensive concerns with environmental education. My personal beliefs which cause me to be active in these matters arise from an industrial background which includes long and intimate involvement in the industries that interface most directly with the environment, chemical engineering, mining and energy. I will

expand on them later, as well as placing my Canada/MAB interests in a broader context.

CANADA/MAB

The Man and the Biosphere (MAB) Programme was established by UNESCO in 1971 as a worldwide programme of international scientific cooperation, dealing with man-environment interactions in the whole range of bioclimatic and geographical situations of the biosphere: from polar to tropical zones, from island and coastal areas to high mountain regions, from sparsely-populated regions to large urban systems.

The general objective of the MAB Programme is to improve the understanding of the global relationship between man and the environment by developing a better understanding of the rational use and conservation of the resources of the biosphere. As a result of these studies, it is hoped to be better able to predict the consequences of today's actions on tomorrow's world, and thereby to increase man's ability to manage efficiently the natural resources of the biosphere.

MAB projects are designed to acquire information through research in the natural and social sciences, essential to national decision-making on the management of natural resources. They are expected to produce results, in the short and medium terms, but they should also advance knowledge that bears on the broad, long-term inter-relationships between man and the biosphere. By their nature, they will be interdisciplinary and multi-disciplinary, and are based, wherever possible, on centres where appropriate facilities are already available and related research is in

progress. The Canada/MAB Committee is designed to coordinate these activities by involving people from government, university and private sectors.

The focus on a continuum of situations and on interfaces between such situations is an essential part of MAB. Equally essential to its success is the recognition of the need for continued concentration within MAB on a limited number of priority themes.

Relations with planners, decision-makers and local populations are considered of special importance for the MAB Programme because it seeks to:

a) link scientific research, conservation of genetic diversity and socio-economic development of natural resources;

b) combine training, field research and environmental education, and the communication and demonstration of results: and,

c) reconcile the international character that a scientific programme like MAB should have with the specific national demands of development.

The MAB Programme has been designed to develop the basis within the natural and social sciences for the rational use and conservation of the resources of the biosphere, and for the improvement of the global relationship between man and the environment. Importance is attached to the integration in the MAB Programme of natural and social sciences, and their links with technology.

The need for periodic, rigorous assessment of MAB activities is recognized. Criteria for evaluation of MAB activities include:

a) the scientific significance of the results of research;

b) the extent to which research results are applicable, or are applied, to resource management;

c) the extent to which a project leads to continuity of scientific endeavour, and the development of research capacity and national infrastructure;

d) the extent to which a project succeeds in building bridges between disciplines and in breaking down sectoral barriers; and,

e) the extent to which a project fosters international cooperation.

Canadian participation in the MAB programme began in May 1974, when the Cabinet agreed that Canadian participation in MAB should be formally approved, that the Department of the Environment should develop the necessary coordinative mechanisms for Canadian participation in this programme, and that an overall review of the effectiveness of the entire Canadian MAB Programme should be undertaken after five years of operation, continuation of Canadian participation being dependent on the outcome of this review.

It was noted that, since there are already in place numerous independent scientific studies on environmental problems by governments,

universities and the private sector, the development of Canada/MAB is to capitalize on existing scientific excellence and the increasing desire by the research community to be engaged in activities of relevance to society. The rational use and conservation of the resources of the biosphere is one such problem area. The emphasis, therefore, was on the creation of the machinery to seize this opportunity to focus this interest and activity in Canada.

The Secretariat was originally established in the Department of the Environment, on the understanding that it would be supported through regular funds from the Department. Since April 1979, it has been housed in the Canadian Commission for Unesco because the Department felt it could no longer support it. Continuing financial and other support has been provided by Environment Canada, Fisheries and Oceans, Indian and Northern Affairs, the National Research Council and the Canada Council. Effective April 1, 1984, Canada/MAB became an integral component of the Canadian Commission for UNESCO. As Chairman of Canada/MAB, it is my objective to develop it into an active and flexible organization, with all committee members having leadership roles and responsibilities in pursuing opportunities to initiate or strengthen the commitment of groups in various parts of Canada to endeavours that are consistent with MAB concepts and goals.

I also intend to do my best to strengthen the MAB perspective through development projects financed by the Canadian International Development Agency (CIDA), through development research supported by the International Development Research Centre (IDRC), and by facilitating Canadian participation in MAB projects in other countries.

Canada/MAB's current activities in this area began with an exploratory consultation on environmental education and training, held in Ottawa on April 12, 1983. At that meeting it was noted that there is considerable activity, interest, and successful experience in Canada; and that any new initiative should try to build upon this and strengthen it, and not be perceived as competing for resources and public support. It was also noted that:-

a) Education and training ultimately is very much a local set of activities involving discreet groups of people with particular interests and needs. Hence, whatever is done should be oriented in such a way that, it ultimately helps a large number of local leaders to take more informed initiatives and work more effectively in quite diverse situations. "Networking" should be viewed as part of the overall process of "leadership development".

b) It is important to be clear about what "level" of networking is envisaged. One area identified as important was the strengthening of arrangements among individuals and groups working at regional and/or provincial levels vis-a-vis those working at sub provincial or community levels. The other area identified as important was the strengthening of networking arrangements among

the provinces or regions of Canada for the exchange of information and experience. This could also help place the various regional and local experience in the larger context of global issues and perspectives. This latter "level" of networking would be the one that Canada/MAB could help facilitate the most.

c) It may be appropriate to drop the word "education" from what is being discussed, simply because of its close connotation with "school" and "provincial jurisdiction". These connotations can too often lead to unhelpful narrowness of thinking and discussion about what can and should be done. Given the intent and scope of UNESCO's working definition of environmental education and training, together with the range of things already being done in Canada that are consistent with it, Canada/MAB might more appropriately view the consultation as one that is addressing the questions of strengthening an "Environmental Information Dissemination Network" or some similar expression of intent.

The question was raised whether Canada/MAB could take the initiative to help with the next step of network building along the lines discussed. It was agreed that the suggestion falls well within the scope of MAB, especially given UNESCO/MAB's new priority on disseminating information for education and training purposes. Canada/MAB also has precedents for establishing working groups that are meant to help develop new means and arrangements for cooperation on a longer-term basis.

At a subsequent planning meeting in August, 1983, it was recommended

that a Working Group on Environmental Information and Training be formed by Canada/MAB, along the above lines. This was approved by Canada/MAB at its December 13, 1983 meeting. The rationale for the formation of the group includes the need for teachers who are fully trained and properly informed in environmental matters (such as the urban environment, for example); public education; the utilization of MAB research results; and a coordinating mechanism that would ensure maximum dissemination of information among educators and the public.

The Working Group's mandate is to:-

a) initiate the establishment of an informal network of some 20 people who are leaders in environmental education and training within either a regional context or some Canada-wide "sectorial" component of the field;

b) assist this group to become a self-sustaining network by 1985 with its own arrangemnets to acquire and disseminate information appropriate to the regional and sub-regional groups with whom they are in regular context;

c) relate Canada/MAB activities and interests to this network and vice-versa, and generally help bring a global perspective to bear on particular issues or other matters of interest in the network.

The Working Group is off to a flying start, led by Mr. Chuck Hopkins of Toronto.

Encouraged by the unanimous agreement during discussions of the MAB programme at the 22nd General Conference of UNESCO in Paris last November, that environmental education is considered to be an essential instrument of the MAB programme, Canada/MAB is considering an invitation to UNESCO, through official channels, that a conference be held in Canada in October, 1987, to mark the Tenth Anniversary of the Tbilisi Conference, to asssess global progress in implementing the recommendations of the Tbilisi Conference and to identify priorities for global cooperation in the next decade.

I believe that, in the international sense, Canada is considered to be one of the more important leaders and movers of the UNESCO MAB programme, and I intend to increase this by much more involvement of the private sector in Canada/MAB's activities.

INTERNATIONAL ENVIRONMENTAL EDUCATION PROGRAMME

Continuing in my capacity of Chairman of Canada/MAB, an additional reason for my being here is the fact that UNESCO and the United Nations Environment Programme are joint sponsors of the International Environmental Education Programme (IEEP), which plays a large central role in environmental education on a world-wide scale. I am delighted that representatives of the United Nations Environment Programme are here to provide you with more detailed information. In the interests of providing a complete overview of my concerns and interests in environmental education, and perception and how best industry can help to keep nature in business given prudent and plentiful doses of environmental education.

INTERNATIONAL ENVIRONMENTAL ISSUES

There are some environmental issues on which joint action among nations may be needed, and which have direct impact on the general public and on industry. Adequate measures may not now exist for implementing international cooperation, but there are some precedents and initiatives to improve this situation. Agreement on the application of existing control technology in the interest of other nations in excess of what one nation might do solely in its own interest may prove to be difficult but necessary. The need to integrate and coordinate some environmental actions at the global, regional, national and local levels is becoming increasingly important.

For example, problems arising from the climatic and other effects of atmospheric pollution arising from some industrial operations or the generation of energy are not the sole concern of any single government or group of governments, even those of countries whose rising standards of living contribute to the problems. Ignorance has been alerted, but much greater knowledge has to be acquired by all concerned, and solutions to these problems require many important and difficult decisions at the international level.

The most recent initiative in this area is the creation of the World Commission on Environment and Development.

WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT

It is gratifying to note one more new activity concerned with

international environmental awareness and cooperation and with which industry should have considerable involvement. On June 20, 1984 it was announced that Canada will make an initial contribution of $200,000 to the World Commission on Environment and Development through the Canadian International Development Agency (CIDA).

Set up by the United Nations 38th General Assembly last fall, the World Commission on Environment and Development will recommend an agenda for action to protect or enhance the environment into the next century, and to increase international environmental awareness and cooperation. The issues addressed by the Commission concern both developed and developing countries, and include acid rain, the management of toxic wastes, deforestation, and the expansion of deserts into previously fertile areas.

The Chairperson of the World Commission is Dr. Gro Harlem Brundtland, former Prime Minister of Norway, and the Vice Chairperson is Mansour Khalid, former Deputy Prime Minister of Sudan. Both have been involved at the highest level in environment and development issues. The selection of other commissioners is well underway, and Canada is represented by Maurice Strong. The first meeting of the World Commission took place at its Geneva headquarters in May 1984.

The federal departments of the Environment and External Affairs have supported the establishment of the World Commission, which has been invited to hold a meeting in Canada. Consultation will take place with the scientific, environment and development communities, federal and provincial officials, industry and the Canadian public in preparation for this meeting. I intend to do everything possible to ensure appropriate industry

understanding of and contribution to this work.

The report of the World Commission will be completed in two years and will then be considered by international organizations and national governments. In addition to Canada's contribution, funding will come from the voluntary contributions of other governments, and from private sources.

OTHER RELEVANT INTERNATIONAL PROGRAMMES

Other relevant international programmes include:-

a) The International Institute of Applied Systems Analysis, (IIASA), with headquarters at Laxenburg, Austria, has devoted several years to preparing for a one-year feasibility study of a project on Sustainable Development of the Biosphere. This study is funded by the Government of Canada and undertaken by the Institute for Environmental Studies at the University of Toronto, in collaboration with IIASA. It is in its final stages, and it is expected to demonstrate clearly that there is ample justification for a long-term international program of policy analysis and research on the Sustainable Development of the Biosphere.

In August, 1984, IIASA held a workshop at its headquarters at which 19 papers were presented by experts commissioned to prepare them. They presented a clear view of environmental issues and environmental/social problems as components of an open-ended, dynamic, interactive system. Among the results of this study should be ways of approaching the management and development of

renewable resources when both the resources and the human actions are likely to be beset by a series of "surprises" that might occur, which could change the environment/resource/society relationships, or challenge the effectiveness of present policies.

At a meeting in Ottawa, September 26, 1984, the Canadian IIASA Steering Group of the feasibility study and some of those who had participated in the August Workshop, it was noted that it will be important to involve industry in the study, rather than merely to present industry with the results or recommendations arising from it.

b) The International Council of Scientific Unions (ICSU) and its member unions have been considering an International Geosphere-Biosphere Project (IGBP). At the ICSU Symposium on "Global Change" held in Ottawa, September 25, 1984, progress in consideration of the IGBB was reported, and the ICSU General Assembly decided that ICSU establish a planning group for the project.

c) The World Council for the Biosphere/International Society for Environmental Education (WCB/ISEE) recently assumed full direction of The World Campaign for the Biosphere, an effort promoted by the Foundation for Environmental Conservation. The goal of the WCB/ISEE is to promote the creation of an ecologically sustainable global environment through international cooperation and education. To this end, the organization intends to enlist the aid of international environment educators, and link them with

decision-makers and other experts on global environmental issues in order to deal with the problems of under and over-development and maintenance of global life support systems.

The first general meeting of the WCB/ISEE was held in New Delhi and Srinagar, India, June 1-9, 1984.

d) Among the additional global scale multi-disciplinary studies either proposed or underway are:-

i) A proposed annual "World Resources Report", developed by the International Institute for Environment and Development (ICEED) and the World Resources Institute.

ii) The "One World" theme, around which grants from The Rockefeller Brothers Fund will be re-directed, to focus on resources and economic and environmental security.

iii) The action being organized to implement the "World Conservation Strategy", drawn up by IUCN, UNEP, and WWF, in collaboration with FAO and UNESCO, for which it is likely that an assessment of progress conference may be held in Ottawa in 1986.

iv) The National Aeronautics and Space Administration's (NASA, USA) work on Global Habitability.

v) The World Resources Institute's new program on "The Global Possible".

vi) The Scientific Committee on Problems of the Environment, (SCOPE) program on "Major Biogeochemical Cycles."

vii) The World Meteorological Organization's (WMO) "World Climate" program.

viii) OCED's study of "Economic and Ecological Interdependence".

ix) The International Federation of Institutes for Advanced Study (IFIAS) project on "Analyzing Biospheric Change"

This is by no means the end of the list. My principal reason for providing this information is to demonstrate the growing and complex set of activities under way, all of which pose a problem not only to environmental educators but to industry, in terms of possible useful participation.

MY VIEWS ABOUT THE ENVIRONMENT

Having described some of the major institutional systems concerned with keeping nature in business through which I work, it is appropriate to state some of my personal beliefs which motiviate me to be active in pursuing their objectives.

a) The environment is what is all around us and where everything happens. Where it all happens is not just air, land and water, but all of nature. The entire globe is involved in environmental considerations that transcend all boundaries and jurisdictions.

b) The environment is defined more formally as the surrounding conditions, and the influences or forces which influence or modify them. Within this context there is a host of physical, biological, physio-social bio-social and psycho-social factors. Therefore, the term environment encompasses every aspect of life and living, every aspect of nature.

c) The environment undergoes and adjusts to constant change because of natural phenomena. Man has added to these changes because of his own activities. He has overgrazed pastures, cleared steep slopes, blocked rivers, over-farmed land, over-killed wildlife, felled too many trees, built roads and communities, drained swamps, and has surface and underground mined to recover many commodities of great value to our way of life.

d) In the past relatively little concern was given to the impact of man's actions upon the environment. Man probably had the erroneous idea that he was put on earth to dominate nature, and to do whatever he chose with it. But, in recent years, many people have insisted that we become aware of air and water pollution, soil erosion, stream siltation and mutilated landscapes as major obstacles to both the quality of the environment and man's future condition on earth. Perhaps man has been greedy, thoughtless, careless or just plain ignorant; and he is just now learning that he must keep nature in business because it is essential for his own continued happy existence. He is learning, and learning fast, that to stay in business, he must help to keep nature in business.

e) Man is supposed to manage his activities in relation to nature so that his needs may be met with least harm to nature. Because there are many people and they all want different things at different times, but often in the same place, it is important to have good criteria and guidelines. If we know what we want, we should be able to know how we are to get it, making sure that we don't upset nature or our communities. How we do this should be discussed with all concerned before starting a project and, after agreement, should be written down. These are the "rules of the game," as it should be played.

(f) I believe that industry has an increasingly real concern with discharging its environmental responsibilities. It should be prepared to do the things that it can believe in as fair, clear, practical, reasonable and necessary. It should be prepared to work with governments in deciding what these things should be. Agreeing on some rules, recommending what should be done by whom, how, when and where, and seeing that it gets done fairly and properly; this is what we must do both to meet our needs and to keep nature in business.

(g) We know that we do not have all the answers. We know that in mining for example, there is no one standard recipe to resolve all problems because of greatly differing soils, topographies, climates, desired uses, etc. We know the serious dangers of making superficial comparisons between problems in one area or country and another. And we know that a sufficient range of technology exists to carry out successful resolution of almost

any specific environmental problem. That technology is continually being improved in every annual cycle.

(h) Finally, it is my environment too. I am personally as dedicated to its conservation as any of those in the audience, perhaps more so. I cannot tolerate casual, careless or arrogant behaviour towards the environment.

THE GOVERNMENT - INDUSTRY PARTNERSHIP

Governments and industry are both concerned with economic grooth, often involving large quantities of material resources and energy. Such activities carry with them the necessity of dealing with an enlarging potential environmental disruption accompanying such growth. The increasing complexity and manipulation of global resources requires sophisticated management to ensure tha the natural resilience of global systems is not exceeded, and that potentially irreversible disruptions and unexpected "surprises" are avoided. It is impossible to say that this cannot be done, and equally impossible to say that it will be.

One of the major problems facing governments and industry is that uncertainties about the future impacts of their current choices suggest that what are believed to be acceptable or even good choices for the near future may prove less satisfactory for the more distant future. This is particularly important because the scale of efforts is often large, and the degree of reversibility and time required to reverse some environmental impacts may be quite long.

Uncertainties often make it difficult for governments and industry to

make universally accepted statements or choices on environmental issues. National and regional perceptions of value differ on many matters. Moreover, environmental impacts differ because of regional characteristics such as meteorology, topography, population density, and resource distribution. For such reasons, those concerned may take differing positions on the nature and extent of the environmental control measurers required.

ENVIRONMENTALLY ACCEPTABLE

Governments and industry together lean increasingly on the two words, "environmentally acceptable" as their joint objective in designing and qualifying industrial projects for implementation. For example, energy related projects require that economic, energy and environmental objectives must be balanced, and the costs of protecting the environment weighed against the benefits to be gained. Assessing where this balance lies in far from simple, but at some stage a judgement has to be made as to the degree of environmental protection for which the costs can be accepted by society, so that regulations and standards may be formulated.

The words "environmentally acceptable" contain a strong element of judgement and are impossible to define in absolute terms. They may be understood to mean "with effects on the environment which are acceptable to governments and to the public". But what is "environmentally acceptable" in terms of effects will change over time, and in particular with advances in pollution control technology and in knowledge of the nature and extent of environmental effects.

This means that, for the best judgements to be made about environ-

mental acceptability, continuing attention must be paid to environmental education, environmental awareness and perception, and to the many relevant areas of research and development. Governments, the private sector and the public are all concerned and each has heavy responsibilities. They should also develop awareness that new technologies arising from research and development in many countries now enable industry to resolve many of the environmental problems that it creates. This vital work must continue, supported by governments on behalf of the public, and by the private sector, so that some damages we may now consider inevitable may be minimized or eliminated.

ENVIRONMENTAL EDUCATION

The U.N. Belgrade Charter of 1968 defines environmental education as that branch of education which seeks to develop a population that is aware of, and concerned about, the environment and its associated problems, and which has the knowledge, skills, attitudes, motivation and commitment to work individually and collectively toward solutions of current problems and the prevention of new ones.

The responsibility for providing environmental education lies largely at the door of those agencies entrusted by the public with the common good; schools universities and government departments. It is a large public responsibility, and can only be managed this way. Others with considerable responsibility are special interest groups, industry and the media.

As an example of industry's growing sensitivity to the environment, and of its responsibilities for public environmental education, the private

sector in Western Canada and Northwestern U.S.A. initiated and continue to support a program of assistance to the formal education systems called SEEDS (Society, Environment and Energy Development Studies). This highly successful programme develops energy and environment related materials for grades 1 to 12, assists teachers in their effective use, and conducts field trips with qualified guides, and is spreading widely in our two countries.

Environmental education must happen in primary and secondary schools, in technical and vocational training establishments, in the universities, and in out-of-school education which can include training on the job. It is only by such public actions that those who will become the government officials, private sector engineers, chemists, lawyers and other decision makers, the public at large, and leaders of interest groups specially concerned with the protection of the environment, will begin to become sensitive to the environment and aware of man's role and responsibilities with respect to it.

Increased attention must also be given to the additional and more specialised environmental training of planners, managers, administrators, economists and lawyers. How to introduce these concepts into the curricula for the training of such professional people requires attention, and it is gratifying that Canada's educational system is moving in the required directions.

A special need that has been identified by both UNESCO and UNEP is that of improving the training of engineers in both the private sector and in government in conservation of the environment and the promotion of their awareness of environmental issues. A positive program to help fill this

need is being developed, recognizing that environmental education has an important part to play both in general university education and in the training of specialists whose later professional activities, often as decision-makers in industry, are likely to have an impact on the environment and its associated problems, their prevention and solution.

Examples of successful Canadian post-secondary programs of this kind are those offered by the Institute for Environmental Studies of the University of Toronto, the Department of Man-Environment Studies at the University of Waterloo, and the Banff Centre School of Management, among others.

GOVERNMENTS AND ENVIRONMENTAL EDUCATION

Perhaps a few words would be in order relevant to the role of the provincial government departments charged with the responsibility for the environment and for environmental education. They have a special contribution to make. The issues involved do not lend themselves to pontification by effete mandarins in a distant capital. Rather, they call for experts in these departments with the same qualifications, skills, sensitivty and awareness, as those in industry should have, who are not too proud to put on their waterproof boots and go sloshing in the mud with their industrial counterparts, looking for the most practical way of doing things, recognizing that each environmental situation is unique and that no single imposed set of standards can possibly apply to even one local situation. Flexibility and good professional common sense and sensitivity are the key to success.

Referring specifically to the Alberta provincial government as an example, the range of interests and services of at least ~~eight~~ eleven departments and agencies is much greater than one would imagine. Their environmental education services are available to schools, universities, industry, special interest groups and the general public. For the exciting and interesting story of what has been going on in this province, the report "Environmental Education in Alberta - the Last Ten Years", released by the Environmental Education Resources Branch, Alberta Environment, May 1984 is recommended reading.

CONCLUSION

Not too many years ago there was some fear and speculation that environmental concerns would fall by the wayside as Canada developed its economy to meet increasing demands for material things and energy. But this did not happen. In recent years the nation's awareness of its many-sided dependence on material goods and energy has sharpened. Over the same period, Canadians have grown increasingly aware of their unparalleled environment, and of those things that threaten it in the course of producing goods and energy.

I trust that these concerns can be reconciled, and that environmental education will pay increasing dividends, as children and adults who have been encouraged to develop an awareness of conservation begin to make decisions in industry, government and their own lives.

I am prepared to continue to work with industry to encourage it to do those things that it sees as fair, clear, practical, reasonable and

necessary; and to work with governments and the concerned public in deciding what these things should be. Much progress has been made, based on environmental education to a large extent.

Ladies and gentlemen, it all depends on your skills and mine, and on our efforts. Perhaps I should have said that we are going to have to work harder, and work together to keep nature in business. But the results are worthy of nothing less than our best efforts.

Thank you.